clinical characteristics and outcome for patients undergoing small versus large culprit vessel PPCI in our unit.
Methods: We included all patients who underwent PPCI in our unit between Sept 2009 and May 2011. They were divided into two groups according to the size of the largest balloon or stent used in the culprit lesion.
Results: Of the 1132 patients who underwent PPCI in our unit during the study period, we excluded 30 (2.7%) patients who did not have either a balloon or stent used in the culprit lesion. Of the remaining 1102 patients, 569 (51.6%) had small (≤3 mm) vessel PPCI and 533 (48.4%) had large (>3 mm) vessel PPCI. Patients with small vessel PPCI were significantly older, more likely to be female and have anterior STEMI with less use of thrombectomy device, but with significantly higher drug eluting stent (DES) usage. There was significantly higher in-hospital mortality (5.3% vs 2.8%, OR 1.9, 95% CI 1-3.6, p 0.047), 30-day mortality (8.4% vs 3.6%,OR 2.5, 95% CI 1.4-4.3, p 0.0009) and 30-day stent thrombosis (1.2% vs 0, p 0.02) in the small vessel PPCI group compared to large vessel PPCI group. On binary logistic regression analysis of small vessel PPCI patients (covariates used: female sex, Age >75 yrs, cardiogenic shock, diabetes, LAD PCI and DES use), the positive predictors of 30-day mortality were age >75 yrs (OR 6.1, 95% CI 2.9 to 12.5, p<0.0001) and cardiogenic shock (OR 9.9, 95% CI 4.3-22.6, p<0.0001) with DES use (OR 0.4, 95% CI 0.2-0.8, p 0.01) being the only negative predictor of mortality.

N (%)	Small (≤3 mm) vessel N= 569	Large (> 3 mm) vessel N= 533	p value
Age (mean±SD, range)	66.8±13.5, 25-96	62.9±13.1, 26-99	<0.0001
Age > 75 yrs	172 (30.2)	94 (17.6)	<0.0001
Female	203 (35.7)	94 (17.6)	<0.0001
Diabetes	68 (11.8)	63 (11.8)	1.0
Cardiogenic shock	42 (7.4)	42 (7.9)	0.73
Previous MI	65 (11.4)	69 (12.9)	0.46
Previous PCI	33 (5.8)	42 (7.9)	0.19
Previous CABG	11 (1.9)	16 (3)	0.33
LAD PCI	293 (51.5)	218 (40.9)	0.0005
Thrombectomy use	363 (63.8)	424 (79.5)	<0.0001
Drug eluting stent use (at least one)	363 (63.8)	289 (54.2)	0.001

Conclusions: In this large consecutive PPCI series from a single center, small culprit vessel size was associated with significantly higher 30-day mortality, more than double the mortality seen in patients with a large culprit vessel.

POSTERS

TCT-503

Predictors of longtime survival in acute myocardial infarction in elderly patients

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Background: Elderly constitute an increasing proportion of all patients, who are admitted for ACS to the hospital, but on the other hand increased age has been identified as an important risk factor for death or recurrent MI in this subset. Furthermore elderly patients are at higher risk for complications with interventional procedures, therefore the overall benefit in such procedures, facing a limited life expectancy in elderly patients anyway, still remains uncertain. The purpose of this study was to identify predictors of longtime survival in either interventionally or conservatively treated elderly patients with ACS in a large consecutive series of elderly (> 75 years).
Methods: Between 01/05 and 11/07 1001 patients > 75 ys. were admitted with the diagnosis of ACS in our hospital. Records were evaluated and patients were identified on the basis of their discharge diagnosis. Adverse outcome, defined as the appearance of death, myocardial infarction, complicated hospital stay, pneumonia and interventional complications like bleeding, stroke and reinfarction etc. was evaluated. Using a multivariate regression analysis, factors which predicted long-time mortality were identified.
Results: Out of 1001 patients (mean age 81±5 Jahre, 512 (51.1% female), Killip-class 1,4±0,75, EF 47±15%) 776 [77.5 %] were treated invasively; whereas 247 [22.5%] were teated conservatively. Mean survival for conservatively treated NSTEMI patients was 789±53 vs. 1237±29 in the invasively treated patients, in the STEMI group survival was 706±128 for conservatively and 1238±44 days for interventionally treated patients respectively (p<0.001). As predictors of long term mortality we identified renal failure ((p<0.001), insulin-treated Diabetes (p=0.001); chronic obstructive pulmonary disease (p=0.002), Grace-Score (p=0.002) intervention (p=0.003), increased body mass index (p=0.018) and age (p=0.042).
Conclusions: In our large data base of 1001 patients age was not the main predictor of long-time mortality. Therefore advanced age should not be the main factor in decision making for conservative or invasive treatment in elderly patients with ACS and an invasive strategy should be offered also to elderly patients.

TCT-504

Long Term Outcomes Among Patients With 'False-positive' STEMI Activations: A Report From The ACTIVATE-SF Registry

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Background: An emphasis on sensitivity in the diagnosis of ST-segment elevation myocardial infarction necessitates a certain degree of 'false positive' diagnoses. Little is known about the long-term outcomes of those ultimately found to lack a culprit coronary artery occlusion despite a putative STEMI diagnosis.
Methods: We analyzed a registry of all STEMI diagnoses established in the Emergency Department (ED) at two urban centers from 2008 to 2011. Subsequent death, ED visits, hospitalizations, and cardiac procedures at our study centers following index hospitalization were evaluated. Statistical analyses were performed using Student's t tests and regression analyses.
Results: During a median follow up of 20 months (IQR=12.2-29.6 months), 13 of 153 'false positive' STEMI diagnoses died as compared to 32 of 248 'true positives' (p = 0.091) (Figure 1). After adjusting for traditional risk factors, all-cause mortality was not statistically different between 'true' and 'false' STEMI diagnoses (AOR 2.26, 95% CI 0.21-24.23, p=0.499). However, false positive status was associated with a significantly higher likelihood of a recurrent visit to the emergency department (AOR 2.73, 95% CI 1.24-6.02 p=0.01), and an increased rate of re-hospitalization (1.04 additional hospitalizations, 95% CI 0.21-1.86, p=0.01) though they also had a trend towards fewer subsequent myocardial infarctions (AOR 0.92, 95% CI −0.17 to 0.01, p=0.07).
Conclusions: Patients with 'false positive' STEMI diagnoses have rates of long term all-cause mortality comparable to a 'true' STEMIs population and have potentially greater rates of recurrent resource utilization. Patients diagnosed with a putative STEMI but found to lack a culprit coronary artery occlusion on angiography remain at great risk for subsequent events and require further study.

TCT-505

Prognostic Impact of Anaemia In Patients With ST Elevation Myocardial Infarction Treated By Primary PCI

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Background: The aim of this study was to investigate the effects of baseline anaemia on the outcome of patients treated by primary percutaneous intervention (PPCI) for ST elevation myocardial infarction.
Methods: We undertook a retrospective cohort study of 2418 STEMI patients treated with PPCI between January 2004 and August 2010 at a single centre. We investigated the outcome of patients with anaemia compared to patients with a normal haemoglobin level. Anaemia was defined according to the WHO definition of haemoglobin (Hb) less than 12 g/dl for females and 13 g/dl for males. We also calculated hazard ratios (HRs) using a stratified model according to haemoglobin level.
Results: 471 (19%) patients were anaemic at presentation. The anaemic cohort were older (72.2 vs. 62.4, p<0.0001), had higher incidence of diabetes (28% vs. 16%, p<0.0001), hypertension (57% vs. 43%, p=0.01), hypercholesterolaemia (48% vs. 40%, p=0.007), previous PCI (15% vs. 9%, p<0.0001), previous MI (23% vs. 12%, p=0.002) and cardiogenic shock (12% vs. 5%, P<0.0001). Over a mean follow-up period of 3-years there was significantly higher all cause mortality in the anaemic group compared to the normal Hb group (20.4% vs. 13.5%, p<0.0001). However, after adjustment for all variables using multivariate analysis, anaemia (based on the WHO definitions) was not an independent predictor of mortality or major adverse cardiac events (MACE) over the follow-up period. However, when we used a stratified model by g/dL we found that in men there was an increased risk of adverse outcome with low Hb. There appeared to be a threshold value of haemoglobin (13 g/dL) associated with increased risk. Although a similar trend was observed for women no significant difference was observed.
Conclusions: Patients with anaemia undergoing primary PCI are at higher risk of an adverse outcome. Anaemia is a simple and powerful marker of poor prognosis. Although after multivariate analysis, anaemia (based on WHO definitions) does not appear to be an independent predictor of all-cause mortality or MACE after primary PCI, in men there appears to be a threshold value of Hb, below which there is an associated increased risk.

TCT-506

Out-Of-Hours Outcomes in STEMI Patients Treated With Primary Percutaneous Coronary Intervention

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Background: The aim of our study was to determine the short and long-term outcomes between patients undergoing PPCI during 'normal hours' (i.e. In-hours) versus 'out-of-hours'. Our primary end point was mortality with a follow-up upto five years.